

What is claimed is:

1. A high frequency power amplification electric part comprising:

a power amplification circuit for amplifying a modulated high frequency signal;

a transistor for output detection, for receiving an input signal from the power amplification circuit;

a current mirror circuit for passing current proportional to current of the transistor; and

a bias generating circuit for supplying a bias to said power amplification circuit in accordance with the current transmitted from the current mirror circuit,

wherein a capacitative element for transmitting fluctuation in an output power is connected between an output terminal side of said power amplification circuit and a control terminal of a transistor for passing the current of the transmission source of said current mirror circuit.

2. The high frequency power amplification electric part according to claim 1, wherein an impedance matching circuit and a capacitative element for blocking direct current are connected between said power amplification circuit and the

output terminal, and one of terminals of said capacitative element for transmitting fluctuation in output power is connected to any one of nodes between the drain terminal of said transistor for power amplification and said capacitative element for blocking direct current.

3. The high frequency power amplification electric part according to claim 1 or 2, wherein said transistor for output detection and said current mirror circuit are formed on the same semiconductor chip, the semiconductor chip and said power amplification circuit are mounted on an insulating substrate, and said capacitative element for transmitting fluctuation in output power is constructed by a dielectric layer formed on said insulating substrate and a pair of conductive layers formed so as to sandwich the dielectric layer.

4. The high frequency power amplification electric part according to any one of claims 1 to 3, wherein said capacitative element for transmitting fluctuation in output power has a capacitance value of 1 pF or larger.

5. The high frequency power amplification

electric part according to any one of claims 1 to 4, further comprising a resistive element for converting the current transferred from said current mirror circuit into a voltage, said resistive element being mounted as a discrete part on said insulating substrate.

6. The high frequency power amplification electric part according to any one of claims 1 to 5, wherein said bias generating circuit has a comparing circuit for comparing a voltage obtained by conversion of said resistive element for current-voltage conversion with an output level instruction signal and outputting a signal according to the difference, and a bias is given to said power amplification circuit on the basis of an output of the comparing circuit.

7. The high frequency power amplification electric part according to any one of claims 1 to 6, wherein said power amplification circuit is constructed by a field effect transistor, and a bias voltage generated by said bias generating circuit is applied to the gate terminal of said transistor for power amplification.

8. The high frequency power amplification

electric part according to any one of claims 1 to 7, wherein in said power amplification circuit, a plurality of transistors are cascaded, a transistor in the final stage is formed on a first semiconductor chip, the transistors other than the transistor in the final stage of said power amplification circuit are formed on a second semiconductor chip, and said transistor for output detection and said current mirror circuit are formed on a third semiconductor chip.

9. The high frequency power amplification electric part according to any one of claims 1 to 7, wherein in said power amplification circuit, a plurality of transistors are cascaded, at least a transistor in the final stage, said transistor for output detection, and said current mirror circuit are formed on the first semiconductor chip, and transistors other than the transistor in the final stage of said power amplification circuit are formed on the second semiconductor chip.

10. The high frequency power amplification electric part according to any one of claims 1 to 9, wherein a resistive element is connected between a control terminal of said transistor for power amplification and a control terminal of said

transistor for output detection.

11. The high frequency power amplification electric part according to any one of claims 1 to 10, wherein a resistive element is connected between said transistor for output detection and a transistor for passing current transmitted from said current mirror circuit.

12. A wireless communication system comprising:  
a high frequency power amplification electric part according to any one of claims 1 to 11;  
a second electric part having a transmission/reception switching circuit for switching between a transmission signal and a reception signal;  
a third electric part for modulating a signal to be transmitted and supplying the modulated signal to said high frequency power amplification electric part; and  
a semiconductor integrated circuit for supplying an output level instruction signal to said high frequency power amplification electric part.

13. The wireless communication system according

to claim 12, wherein said high frequency power amplification electric part has a first power amplification circuit for amplifying a signal in a first frequency band and a second power amplification circuit for amplifying a signal in a second frequency band,

    said second electric part has signal switching means for switching between a signal in the first frequency band and the signal in the second frequency band, and

    said third electric part has a circuit for modulating the signal in the first frequency band and a circuit for modulating a signal in the second frequency band.

14. A high frequency power amplification electric part comprising:

    a power amplification circuit having an output terminal for receiving a high frequency signal as an input signal and outputting a signal according to the input signal;

    a detecting circuit having a transistor for output detection which receives the input signal from the power amplification circuit, and forming an output signal according to said input signal;

    a bias generating circuit for applying a bias according to the output signal of the

detecting circuit to said power amplification circuit; and

a capacitative element for transmitting fluctuation in said output terminal to said detecting circuit, which is connected between the output terminal of said power amplification circuit and said detecting circuit.

15. The high frequency power amplification electric part according to claim 14, wherein an impedance matching circuit and a capacitative element for blocking direct current are connected between the output terminal of said power amplification circuit and a terminal to which an antenna is to be connected, and one of terminals of said capacitative element is connected between the output terminal of the power amplification circuit and said capacitative element for blocking direct current.

16. A wireless communication system comprising:  
a high frequency power amplification electric part according to claim 14 or 15;  
a second electric part having a transmission/reception switching circuit for switching between a transmission signal and a reception signal;

a third electric part for modulating a signal to be transmitted and supplying the modulated signal to said high frequency power amplification electric part; and

a semiconductor integrated circuit for supplying an output level instruction signal to said high frequency power amplification electric part.